

Subject: INFO-HAMS Digest V89 #929
To: INFO-HAMS@WSMR-SIMTEL20.ARMY.MIL

INFO-HAMS Digest Fri, 24 Nov 89 Volume 89 : Issue 929

Today's Topics:

NASA Prediction Bulletins

Date: Fri, 24 Nov 89 21:52:53 EST
From: tkelso@afit-ab.arpa (TS Kelso)
Subject: NASA Prediction Bulletins

The most current orbital elements from the NASA Prediction Bulletins are carried on the Celestial RCP/M, (513) 427-0674, and are updated several times weekly. Documentation and tracking software are also available on this system. As a service to the satellite user community, the most current of these elements are uploaded weekly to sci.space. This week's elements are provided below. The Celestial RCP/M may be accessed 24 hours/day at 300, 1200, or 2400 baud using 8 data bits, 1 stop bit, no parity.

- Current NASA Prediction Bulletins #606 -

Alouette 1

1 00424U 62B-A 1 89317.91443840 .00000490 00000-0 57637-3 0 2426
2 00424 80.4646 138.2952 0024107 104.8734 255.5121 13.67236368353277

SOLRAD R/B

1 00727U 64001 A 89317.42255927 .00000358 00000-0 30346-3 0 3170
2 00727 69.9011 136.2783 0016399 267.2813 92.6432 13.93620084313886

ATS 1

1 02608U 66110 A 89313.27141334 .00000056 00000-0 99999-4 0 743
2 02608 13.3407 15.4419 0001517 4.6393 355.3415 1.00384676 347

Cos 185 R/B

1 03019U 67104 B 89317.50701519 .00016133 00000-0 10910-2 0 4955
2 03019 64.0627 359.6969 0200567 208.8772 150.1108 14.91718402127330

ATS 3

1 03029U 67111 A 89316.21324956 -.00000074 00000-0 99999-4 0 2656
2 03029 12.9261 22.9696 0018048 204.4486 155.4581 1.00272677 80627

Cosmos 398

1 04966U 71 16 A 89318.28094547 .00090688 15983-4 56351-3 0 2535
2 04966 51.5187 43.1778 2433995 113.6394 273.7692 10.70994342568303

Starlette

1 07646U 75010 A 89313.41220473 .00000044 00000-0 00000-0 0 9979
2 07646 049.8274 305.6635 0206525 185.6199 174.2907 13.82124455745388

LAGEOS

1 08820U 76039 A 89317.63897937 .00000005 00000-0 00000 0 0 9313
2 08820 109.8539 281.2753 0044701 284.0799 75.4516 6.38664160 60170

GOES 2

1 10061U 77048 A 89314.36420535 -.00000005 00000-0 00000 0 0 3255

2 10061 7.5199 66.4493 0008069 171.6147 188.3239 1.00275746 6847
 GPS-0001
 1 10684U 78020 A 89318.03603765 .00000009 00000-0 99999-4 0 2749
 2 10684 63.5202 96.1524 0113222 198.7047 160.9124 2.00558912 71534
 GPS-0002
 1 10893U 78 47 A 89317.00327800 -.00000026 00000-0 00000 0 0 590
 2 10893 64.4687 337.0927 0156402 27.1378 333.7220 2.00552255 84339
 GOES 3
 1 10953U 78062 A 89316.40583895 .00000080 00000-0 99999-4 0 7669
 2 10953 6.3927 69.1044 0007078 237.6426 122.1619 1.00287381 2423
 SeaSat 1
 1 10967U 78064 A 89318.05401248 .00002876 00000-0 10497-2 0 1944
 2 10967 108.0078 236.3829 0002812 253.2778 106.8116 14.35058687595581
 GPS-0003
 1 11054U 78093 A 89316.81124658 -.00000026 00000-0 00000 0 0 1170
 2 11054 64.0123 333.4823 0055077 120.1757 240.4154 2.00563995 81347
 GPS-0004
 1 11141U 78112 A 89315.91016921 .00000009 00000-0 00000 0 0 2296
 2 11141 63.6207 96.1606 0055896 319.3627 40.1982 2.00566928 80028
 NOAA 6
 1 11416U 79 57 A 89317.51370376 .00001809 00000-0 77071-3 0 9264
 2 11416 98.5136 310.3554 0008329 84.4459 275.7718 14.26177074539186
 GPS-0005
 1 11690U 80 11 A 89315.04872120 .00000011 00000-0 00000 0 0 8650
 2 11690 64.0998 98.1570 0109449 203.0010 156.4806 2.00558202 85869
 Solar Max
 1 11703U 89324.12266154 0.00897180 42785-3 14620-2 0 2029
 2 11703 28.4910 234.1006 0001471 284.0568 75.8424 16.02329755544328
 GPS-0006
 1 11783U 80 32 A 89322.84768059 -.00000026 00000-0 00000 0 0 9891
 2 11783 63.8188 332.9359 0143071 60.7308 300.7260 2.00571734 70105
 GOES 4
 1 11964U 80 74 A 89311.97352998 .00000024 00000-0 00000 0 0 1003
 2 11964 5.8218 73.2495 0119799 75.4792 285.5157 0.99230012 3458
 GOES 5
 1 12472U 89319.24878916 -.00000245 10000-3 0 7714
 2 12472 2.9252 78.5518 0002182 190.0454 169.6133 1.00253654 30107
 SME
 1 12887U 81100 A 89316.07463644 .00040778 00000-0 11775-2 0 3721
 2 12887 97.6706 347.5558 0003370 86.8821 273.2806 15.35549389447797
 Meteor 2-08
 1 13113U 82 25 A 89314.97169383 .00000349 00000-0 30301-3 0 6743
 2 13113 82.5329 302.0843 0016258 16.4721 343.6987 13.84075029385547
 Salyut 7
 1 13138U 89319.62539845 0.00038355 71061-3 0 8752
 2 13138 51.6092 292.5365 0001652 80.3139 279.7512 15.48607815431603
 Cosmos 1383
 1 13301U 82 66 A 89312.91922537 .00000185 00000-0 20508-3 0 5179

2 13301 82.9280 102.2092 0029145 48.1109 312.2533 13.67765645367565
 LandSat 4
 1 13367U 82 72 A 89317.78339859 .00004093 00000-0 91726-3 0 1603
 2 13367 98.1957 19.1950 0003773 83.8186 276.3475 14.57149960389932
 Meteor 2-09
 1 13718U 82116 A 89312.59959215 .00000553 00000-0 28468-3 0 8315
 2 13718 81.2471 140.2743 0055658 309.4549 50.1700 14.13357239355957
 IRAS
 1 13777U 83 4 A 89317.32383283 .00000487 00000-0 36278-3 0 6928
 2 13777 99.0319 152.3341 0011887 258.1056 101.8776 13.98672545 16769
 Cosmos 1447
 1 13916U 83 21 A 89317.64660793 .00000221 00000-0 22324-3 0 6597
 2 13916 82.9477 171.3890 0039440 21.4429 338.8384 13.73973413333074
 TDRS 1
 1 13969U 83 26 B 89317.25865374 -.00000208 00000-0 00000 0 0 8747
 2 13969 3.9525 67.1345 0004026 191.8772 167.8654 1.00272210 90918
 GOES 6
 1 14050U 83 41 A 89314.45964869 .00000110 00000-0 00000 0 0 365
 2 14050 1.6672 80.9006 0002779 185.9244 174.0121 1.00291703 8079
 OSCAR 10
 1 14129U 89314.29316551 -.00000098 0 4388
 2 14129 25.9139 234.7983 6026851 92.0239 333.5975 2.05884287 20222
 GPS-0008
 1 14189U 83 72 A 89316.95424119 .00000009 00000-0 99999-4 0 6743
 2 14189 63.2542 94.6716 0140094 215.5025 143.5337 2.00563562 46429
 Meteor 2-10
 1 14452U 83109 A 89318.09960415 .00001231 00000-0 52286-3 0 7867
 2 14452 81.1610 143.2953 0095722 25.1360 335.4431 14.22429923313855
 LandSat 5
 1 14780U 84 21 A 89321.93169603 .00002649 00000-0 59713-3 0 9781
 2 14780 98.1478 21.0703 0004017 116.7051 243.4521 14.57147295303951
 UOSAT 2
 1 14781U 84 21 B 89318.20721832 .00004093 00000-0 78246-3 0 5486
 2 14781 97.9837 12.5611 0011976 206.8997 153.1702 14.64360091304490
 LDEF
 1 14898U 89322.71230417 0.00107751 96440-3 0 525
 2 14898 28.5005 157.9000 0001018 0.9810 359.2115 15.66818965315563
 GPS-0009
 1 15039U 84 59 A 89316.51631196 .00000008 00000-0 00000 0 0 7617
 2 15039 62.9946 93.9271 0015471 243.4714 116.3477 2.00563187 39698
 Cosmos 1574
 1 15055U 84 62 A 89314.78073931 .00000210 00000-0 21474-3 0 7991
 2 15055 82.9555 223.2674 0026300 209.4127 150.5565 13.73290222270090
 Meteor 2-11
 1 15099U 84 72 A 89318.20893943 .00000585 00000-0 51917-3 0 9794
 2 15099 82.5302 247.0424 0012792 170.7262 189.4140 13.83735567270863
 GPS-0010
 1 15271U 84 97 A 89316.91396939 -.00000026 00000-0 00000 0 0 7266

2 15271 63.3136 332.7676 0103636 321.9378 37.3775 2.00569802 36818
 Cosmos 1602
 1 15331U 84105 A 89317.16164757 .00006458 00000-0 92093-3 0 1144
 2 15331 82.5402 200.8673 0022781 322.7812 37.1847 14.76473663276199
 NOAA 9
 1 15427U 84123 A 89318.27266547 .00001390 00000-0 77565-3 0 4525
 2 15427 99.1567 308.2879 0014351 251.6729 108.2882 14.12281363253641
 Meteor 2-12
 1 15516U 85 13 A 89315.05702682 .00000445 00000-0 38833-3 0 1309
 2 15516 82.5373 187.9353 0017924 63.3549 296.9448 13.84212462241379
 Cosmos 1686
 1 16095U 89320.01260610 0.00012209 23259-3 0 4148
 2 16095 51.6093 290.6230 0000800 177.2817 182.8830 15.48599768232762
 GPS-0011
 1 16129U 85 93 A 89316.57318419 .00000009 00000-0 00000 0 0 3632
 2 16129 63.7811 94.7095 0121247 149.8791 210.8003 2.00561708 30014
 Meteor 3-1
 1 16191U 85100 A 89314.91927952 .00000044 00000-0 99999-4 0 8740
 2 16191 82.5430 132.0124 0018864 295.2548 64.6622 13.16881860194830
 Meteor 2-13
 1 16408U 85119 A 89317.88330794 .00000328 00000-0 28403-3 0 5464
 2 16408 82.5322 100.5554 0014849 241.2521 118.7186 13.84238323196269
 Mir
 1 16609U 89320.27208281 0.00107936 15426-2 0 2082
 2 16609 51.6249 320.4145 0004287 42.0968 318.1336 15.55384791214886
 SPOT 1
 1 16613U 86 19 A 89317.88605337 .00001717 00000-0 82439-3 0 6676
 2 16613 98.7264 30.4633 0001633 100.1090 260.0285 14.20053743 33376
 Meteor 2-14
 1 16735U 86 39 A 89314.99140760 .00000182 00000-0 15475-3 0 3360
 2 16735 82.5374 129.7604 0014280 325.9152 34.1084 13.83987553174761
 Cosmos 1766
 1 16881U 86 55 A 89317.84406823 .00006731 00000-0 96613-3 0 7983
 2 16881 82.5165 259.5512 0021241 337.6763 22.3569 14.76216972177363
 EGP
 1 16908U 86 61 A 89304.02055883 -.00000016 00000-0 18794-3 0 1554
 2 16908 50.0104 240.5066 0010893 330.4310 29.5907 12.44381948146326
 FO-12
 1 16909U 86 61 B 89304.07884460 -.00000025 00000-0 99999-4 0 1749
 2 16909 50.0168 240.6055 0010698 329.6461 30.3754 12.44402062146327
 NOAA 10
 1 16969U 86 73 A 89321.28051454 .00001315 00000-0 59694-3 0 3065
 2 16969 98.6253 348.7837 0013841 162.2709 197.8969 14.23293842164468
 Meteor 2-15
 1 17290U 87 1 A 89317.25439597 .00000573 00000-0 50893-3 0 3084
 2 17290 82.4680 34.2112 0012107 200.3538 159.7151 13.83799130144231
 MOS-1
 1 17527U 87 18 A 89317.87943328 .00000006 00000-0 17327-4 0 3105

2 17527 99.1353 27.9506 0000624 73.7260 286.3981 13.94890291139242
GOES 7
1 17561U 87 22 A 89318.13979794 -.00000056 00000-0 00000 0 0 3699
2 17561 0.0997 66.9533 0000231 241.4921 51.5717 1.00207071 3263
Kvant
1 17845U 89320.01485833 0.00070743 10202-2 0 9121
2 17845 51.6197 321.7010 0004277 38.4846 320.5171 15.55329370151111
DMSP B5D2-3
1 18123U 87 53 A 89317.92442427 .00001655 00000-0 89525-3 0 4219
2 18123 98.8191 146.4099 0013917 276.9840 82.9762 14.13680035123981
RS-10/11
1 18129U 89320.01088864 0.00000329 35139-3 0 9412
2 18129 82.9226 126.0265 0011838 357.2405 2.8686 13.72027755120216
Cosmos 1867
1 18187U 87 60 A 89317.91654338 .00001590 00000-0 65638-3 0 79
2 18187 65.0128 324.6383 0016411 252.4717 107.4612 14.29453164122521
Meteor 2-16
1 18312U 89319.85149404 0.00000219 18868-3 0 3348
2 18312 82.5522 99.3766 0013090 126.1758 234.0633 13.83541691113483
Meteor 2-17
1 18820U 88 5 A 89314.98456999 .00000309 00000-0 26715-3 0 1699
2 18820 82.5460 163.9040 0015568 215.9267 144.0862 13.84239929 89996
DMSP B5D2-4
1 18822U 88 6 A 89317.43049600 .00001522 00000-0 71848-3 0 3240
2 18822 98.6722 195.5967 0006748 167.9913 192.1591 14.21054374 92178
AO-13
1 19216U 89317.74564182 0.00000231 37172+0 0 519
2 19216 57.1202 182.3096 6831353 215.0976 70.6209 2.09708029 10873
OKEAN 1
1 19274U 88 56 A 89317.88522347 .00006511 00000-0 94439-3 0 5594
2 19274 82.5183 358.1516 0024180 104.8067 255.5898 14.75720918 73154
Meteor 3-2
1 19336U 88 64 A 89317.71884001 .00000391 00000-0 99999-3 0 3035
2 19336 82.5405 69.8774 0016927 127.3864 232.8670 13.16865990 62593
NOAA 11
1 19531U 89318.30710379 0.00001670 94455-3 0 1623
2 19531 98.9559 261.7378 0012368 165.2246 194.9281 14.11276972 58654
TDRS 2
1 19548U 88 91 B 89308.35404435 .00000131 00000-0 99999-4 0 488
2 19548 0.0121 134.3737 0002322 92.2857 133.3404 1.00275755 3196
Cosmos 2001
1 19796U 89318.35429513 -.00000989 10324-1 0 2634
2 19796 62.9093 120.8952 7194412 319.5447 4.8671 2.00606325 5499
GPS-0014
1 19802U 89318.07872726 0.00000016 10000-3 0 551
2 19802 55.0784 205.8997 0062753 156.9923 203.3780 2.00560039 5439
Meteor 2-18
1 19851U 89320.24992018 0.00000117 10000-3 0 1007

2	19851	82.5206	38.1041	0013686	241.2737	118.7075	13.83875227	36112	
TDRS 3									
1	19883U	89 21	B	89314.97483781	-.000000234	00000-0	99999-4 0	351	
2	19883	0.0297	7.4091	0005563	231.3475	121.3681	1.00270705	1706	
GPS-0013									
1	20061U			89317.76500304	-.000000031		0	378	
2	20061	54.6687	24.5908	0084070	169.2506	190.9578	2.00567681	3178	
Nadezhda									
1	20103U	89 50	A	89315.00353235	.000000218	00000-0	22192-3 0	479	
2	20103	82.9577	85.8279	0036678	287.4290	72.2857	13.73522549	17760	
GPS-0015									
1	20185U	89 64	A	89298.79060532	.000000015	00000-0	99999-4 0	212	
2	20185	54.9529	207.5354	0025372	139.3926	220.8319	2.00572367	5990	
Progress M									
1	20191U	89 66	A	89321.87828728	.00016537	00000-0	24423-3 0	794	
2	20191	51.6206	312.3939	0003551	32.6656	327.5442	15.55475479	13549	
Soyuz TM-8									
1	20218U	89 71	A	89316.74075728	.00031762	00000-0	44518-3 0	686	
2	20218	51.6244	338.0938	0004836	308.2284	51.8860	15.56462731	10592	
Cosmos 2038									
1	20232U			89307.06014179	0.000000004		0	234	
2	20232	82.5747	135.6619	0010825	276.3117	83.6741	12.65098703	6273	
Cosmos 2040									
1	20234U			89307.09151014	0.000000004		0	194	
2	20234	82.5882	135.8634	0004530	68.7531	291.4042	12.62285197	6267	
Cosmos 2041									
1	20235U			89299.01282557	0.000000004		0	161	
2	20235	82.5844	140.8923	0008466	305.5606	54.4700	12.64510000	5263	
Cosmos 2042									
1	20236U			89307.10818638	0.000000004		0	190	
2	20236	82.5796	135.7400	0004228	272.3400	87.7205	12.63875175	6286	
1989 074G									
1	20238U			89306.41478462	0.000000004		0	136	
2	20238	82.5897	136.7280	0041603	94.7788	265.8049	12.55209541	6150	
1989 077B									
1	20254U			89308.19001358	0.00062423	20971-4	18788-2 0	713	
2	20254	28.4380	302.8752	7197554	205.0331	88.2559	2.43068192	977	
Molniya1-76									
1	20255U			89299.19849953	0.000000322		38808-2 0	377	
2	20255	62.8121	171.5444	7355952	288.2454	9.5519	2.00644502	609	
1989 078B									
1	20256U			89299.23374591	0.13799275	42989-4	24516-3 0	740	
2	20256	62.8052	66.9312	0025738	121.7385	238.1190	16.44993496	4529	
Cosmos 2046									
1	20259U			89315.77766119	0.00039250		64555-3 0	1019	
2	20259	65.0314	134.0046	0009867	272.0146	87.9628	15.52107000	7007	
InterCos 24									
1	20261U			89308.75277529	0.00002087		65514-3 0	1018	

2	20261	82.5973	10.9293	1263681	125.3260	247.2505	12.42632663	4708
1989 080C								
1	20262U			89300.05301050	0.00001969		61710-3 0	449
2	20262	82.6012	16.4356	1263811	144.9220	224.2128	12.42664468	3627
Gorizont 19								
1	20263U			89306.38348734	- .00000255		10000-3 0	468
2	20263	1.3488	276.1628	0000941	291.1377	69.4080	1.00270678	362
1989 081D								
1	20266U			89303.29822252	- .00000247		10000-3 0	124
2	20266	1.3838	275.7338	0032692	309.0460	50.2639	1.00602746	348
Cosmos 2047								
1	20279U			89321.28010204	0.01014247	28605-4	35101-3 0	1337
2	20279	67.1054	71.8130	0073043	118.5532	242.3326	16.18150997	7205
Maigon-2								
1	20281U			89321.23047500	- .00001059		-33552-3 0	1176
2	20281	82.5944	3.0200	1263875	97.1649	277.4407	12.42778015	6251
1989 084C								
1	20299U			89319.66030688	0.00005136		30662-2 0	296
2	20299	34.2162	136.1180	7090533	18.4605	357.8498	2.49665854	691
GPS-0016								
1	20302U			89323.45246969	- .00000031		10000-3 0	255
2	20302	54.7633	325.6172	0037638	304.3952	55.2616	2.00575140	544
1989 085B								
1	20303U			89323.96620349	0.00008655		11241-2 0	256
2	20303	35.6523	157.9251	0337959	332.2669	26.0381	14.47450817	4286
1989 085C								
1	20304U			89322.68613989	0.00169654	11019-4	19126-2 0	532
2	20304	37.6875	303.2814	5989550	224.0334	68.6924	4.16248238	1179
Meteor 3-3								
1	20305U			89318.33922688	0.00000549		14327-2 0	201
2	20305	82.5557	9.5369	0016851	141.7259	218.5067	13.15843976	2699
1989 086B								
1	20306U			89324.26625817	0.00003178		83495-2 0	398
2	20306	82.5541	5.3482	0017145	126.8191	233.4504	13.16040242	3474
IntelSat 6A								
1	20315U			89318.95303440	- .00000222		10000-3 0	168
2	20315	0.1004	46.8383	0014605	217.1669	95.7635	1.00269130	140
1989 087B								
1	20316U			89322.64692500	0.00007982		58332-2 0	177
2	20316	6.9964	187.5682	7262653	196.6139	112.3993	2.27680376	505
1989 070C								
1	20317U			89322.32369989	- .00000058		10000-3 0	107
2	20317	1.5897	287.8923	0231273	233.5191	124.4184	0.98762583	211
1989 088A								
1	20320U			89324.11899923	0.00385864	75273-4	48842-3 0	122
2	20320	64.7828	244.6920	0039275	77.1481	283.3825	16.05515385	432
1989 088B								
1	20321U			89323.41213813	0.15972281	37988-4	34525-3 0	117

2 20321 64.7860 247.1374 0025615 73.7460 286.9437 16.43881345 322
1989 089A

1 20322U 89323.29162194 0.00033906 22795-1 0 63

2 20322 99.0232 330.9119 0006166 232.5804 127.4619 14.00351918 96
1989 089B

1 20323U 89323.27444123 0.00000017 10142-4 0 37

2 20323 97.0713 331.6024 0080118 291.0995 68.1695 14.40054488 93

--

Dr TS Kelso Asst Professor of Space Operations
tkelso@blackbird.afit.af.mil Air Force Institute of Technology

End of INFO-HAMS Digest V89 Issue #929
